

# **OPTIMIZATION OF FACTORS THAT INFLUENCE THE “SETTLEMENT” OF THE CONCRETE IN MIXER TRANSPORT**

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## **Abstract**

The research seeks to determine the relationship of the settlement as a parameter of the quality of the concrete, with the volume and pressure of the manometer of the concrete mixer truck, by means of a multiple linear regression model in a concrete manufacturing company. A regression model was generated where the variables volume of the mixer and pressure turned out to be statistically significant ( $p$  value  $< 0.05$ ), the linear correlation coefficient was 72.4% which speaks well of the level of relationship between the independent variables and the dependent variable, in addition the average forecast error was 0.0000003 following the model residuals a normal distribution,  $p$  value of the KolmogorovSmirnov test was 0.5913, therefore the model has good behavior at the time to correctly forecast the value of the settlement. The model will allow an approximate estimation of the settlement behavior.

## **Keywords**

Settlement, Concrete, Quality, Customer satisfaction, Regression model